

Spare the television and improve the child

Reducing the amount of time that primary school children spend watching television and playing video games can make them less aggressive towards their peers, a new study has reported.

In the study the researchers, led by Dr Thomas Robinson, assistant professor of paediatrics at Stanford University in Palo Alto, California, looked at 225 third and fourth grade children (9 and 10 year olds) at two similar public elementary schools in San Jose, California (*Archives of Pediatric and Adolescent Medicine* 2001;155:17-23).

At one school 120 participants received no intervention and served as a control group. At the other, 105 children received 18 lessons, 30 to 50 minutes long, over six months on reducing the use of television, videos, and video games.

Peer reports of aggression were similar at the two schools at the outset, but in the intervention group, reports of aggression had dropped by 25% by the end of the study. Children in the intervention group were also involved in 50% fewer incidents of verbally aggressive behaviour in the playground than the children at the control school.

Scott Gottlieb *New York*

Exercise during pregnancy may increase birth weight

Women who start a moderate exercise programme during early pregnancy may improve their likelihood of giving birth to a healthy baby, according to the results of a new study.

Dr James Clapp, professor of reproductive biology at Case Western Reserve University in Cleveland, Ohio, and colleagues studied 46 women who were not exercising regularly and were 8 weeks pregnant. The women were randomly asked to under-



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take either moderate weight bearing exercise three to five times a week (n=22) or no exercise for the rest of the pregnancy (n=24) (*American Journal of Obstetrics and Gynecology* 2000; 183:1484-8).

Infants born to the women who exercised were significantly heavier and longer than those whose mothers did not exercise. In addition, mid-trimester placental growth rate was faster and indexes of placental function were greater in the exercise group.

Scott Gottlieb *New York*

Bush cuts aid to overseas groups helping women obtain abortions

President Bush this week moved to reinstate restrictions on abortion that had been in place under the previous Bush and Reagan administrations.

He reversed the Clinton administration's policy on aid for international family planning groups, which Mr Clinton had instituted in his first days as president.

"It is my conviction that taxpayer funds should not be used to pay for abortions or advocate or actively promote abortion either here or abroad," Mr Bush wrote in an executive memorandum to the Agency for International Development, which administers and monitors family planning aid to overseas groups. Fred Charatan *Florida*

Resistin: a new hormone that links obesity with type 2 diabetes

Abi Berger *BMJ*

A new hormone has been identified that links obesity to type 2 diabetes. It has been called resistin (for "resistance to insulin"), and, although first identified in mice, it has also now been found in humans. Its US discoverers believe that it goes some of the way to explaining how obesity predisposes people to diabetes (*Nature* 2001;409:307-12).

Type 2 diabetes has long been observed to be associated with obesity. Insulin resistance is the hallmark of type 2 diabetes and is manifested all over the body. In addition, thiazolidinediones, the new class of anti-diabetic drugs that lower insulin resistance are mediated by PPAR γ receptors, which are particularly abundant in fat cells.

From these two facts, scientists have hypothesised that it is the body's fat cells that trigger insulin resistance around the rest of the body. Now Dr Mitchell Lazar and his colleagues at the Pennsylvania School of Medicine claim they have identified a fat cell protein that may be responsible for this.

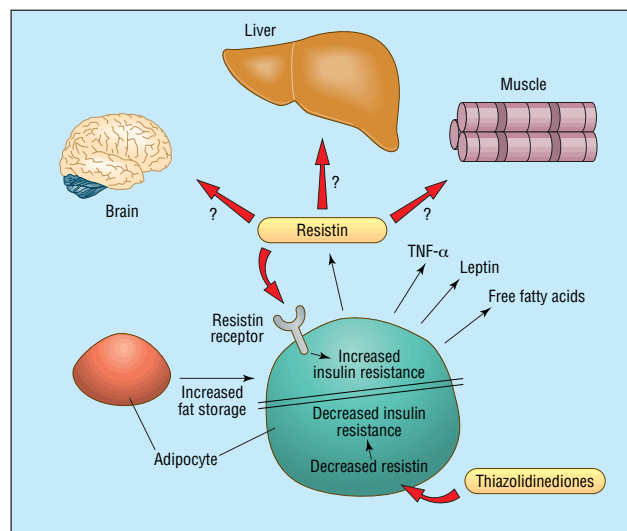
Dr Lazar, director of the Penn Diabetes Center, assumed that thiazolidinediones may work via PPAR γ receptors to

switch on or off a fat cell specific gene that is involved in insulin mediated signalling pathways.

He and his team treated cultured fat cells with thiazolidinediones, and in doing so identified a new messenger RNA (mRNA) that was expressed only in adipose tissue and is suppressed by thiazolidinediones. This new mRNA encodes for a protein which is produced in plentiful supply by the adipose tissue of obese rodents.

Furthermore, secretion of the new protein from fat cells into the blood stream was reduced when these mice were treated with thiazolidinediones. "The secreted molecule resembled nothing we'd seen before, and because it has a cellular export signal, we identified it as a hormone," explained Dr Lazar. The researchers went on to show that the hormone, which they named resistin, is also found to circulate in high levels in diabetic mice.

The next step is to produce a resistin knock-out mouse to confirm that resistin is critical in the development of diabetes, and also to administer purified resistin to normal mice to see if this reduces their ability to handle glucose. □



As fat cells (adipocytes) store more fat molecules, they release several products that can modify the body's sensitivity to insulin, such as free fatty acids and tumour necrosis factor α (TNF- α), which cause insulin resistance. A newly identified protein, resistin, which is secreted by adipocytes, causes insulin resistance. Thiazolidinedione drugs, which are used to treat type 2 diabetes, may work through suppressing the expression of resistin by adipocytes.